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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HAYES, SOLOWAY, HENNESSEY, GROSSMAN & HAGE, P.C.
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MANCHESTER, NH 03101-2335

EXAMINER

STAIKOVICI, STEFAN

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

008

Office Action Summary

Application No.

09/780,919

Applicant(s)

KAPTEYN ET AL.

Examiner

Stefan Staicovici

Art Unit

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 9-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Response to Amendment

1. Applicants' amendment filed September 22, 2003 (Paper No. 7) has been amended. Claims 1 and 12 have been amended. Claims 1-13 are pending in the instant application.

Claim Objections

2. Claims 1-8 and 12-13 objected to because of the following informalities:
 - in claim 1, line 6, after "material", --of-- should be inserted;
 - in claim 12, line 6, after "material", --of-- should be inserted.

Appropriate correction is required.

Claim Rejections - 35 USC § 102/103

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2 are rejected under 35 U.S.C. 102(b) as anticipated by Takahashi (US Patent No. 4,870,359) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Takahashi (US Patent No. 4,870,359) in view of JP 58-123402.

Takahashi ('359) teach the claimed process for measuring the thickness of a non-metallic material (plastic) including, providing a molded non-metallic material (1), interposing said molded non-metallic material between a metallic mold (2) holding said molded non-metallic material (see col. 2, lines 35-40) (holding form having essentially the same shape as at least a portion of said trim panel material [of] known shape wherein the portion of the holding form which corresponds to the region of the trim panel material to be measured is metallic) and an induction probe (3) and, generating an alternating magnetic field (4) which upon conversion measures said thickness (see Abstract and Figure 1). It is submitted that by moving said induction probe (3) along said molded non-metallic material (1) a thickness profile is obtained.

However, even if such a teaching is not inherent to Takahashi ('359), JP 58-123402 teaches that by moving an induction probe along the length of a non-metallic material a thickness profile of said non-metallic material can be determined. Therefore, it would have been obvious for one of ordinary skill in the art to have moved an induction sensor along the length of a non-metallic material to determine a thickness profile as taught by JP 58-123402 in the process of Takahashi ('359) because of known advantages that a thickness profile provides such as, improved process control and improved product quality.

Further, it should be noted that recitation of the intended use of the claimed process must result in a structural difference between the claimed process and the prior art in order to patentably distinguish the claimed invention from the prior art. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art.

Regarding claim 2, Takahashi ('359) teaches A.C. bridge circuit (linear analog sensor) (see col. 4, lines 13-19).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5, 7-8 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer *et al.* (US Patent No. 6,294,124 B1) in view of Takahashi (US Patent No. 4,870,359) and in further view of GB 2 2217 835.

Bauer *et al.* ('124) teach the basic claimed process of measuring the thickness of an automotive trim panel including, providing a trim panel, scoring said trim panel and measuring the thickness of said trim panel while scoring (determining a thickness profile) in order to determine the thickness of the remaining material (see column 6, line 55 through column 7, line 23).

Regarding claims 1 and 12, although Bauer *et al.* ('124) teach a thickness measuring system, Bauer *et al.* ('124) do not teach an inductive thickness measurement system. Takahashi ('359) teach a process for measuring the thickness of a non-metallic material (plastic) including, providing a molded non-metallic material (1), interposing said molded non-metallic material between a metallic mold (2) holding said molded non-metallic material (see col. 2, lines 35-40) (holding form having essentially the same shape as at least a portion of said trim panel material [of] known shape wherein the portion of the holding form which corresponds to the region of the trim panel material to be measured is metallic) and an induction probe (3) and, generating an alternating magnetic field (4) which upon conversion measures said thickness (see Abstract and Figure 1). It is submitted that by moving said induction probe (3) along said molded non-metallic material (1) a thickness profile is obtained. GB 2 2217 835 specifically teaches that laser, ultrasonic and inductive systems are equivalent alternatives that are used in measuring the thickness of a non-metallic panel. Therefore, it would have been obvious for one of ordinary skill in the art to have provided an inductive thickness measurement system as taught by Takahashi ('359) as an equivalent alternative to the laser thickness measurement system in the process of Bauer *et al.* ('124) because, GB 2 2217 835 specifically teaches that laser, ultrasonic and inductive systems are equivalent alternatives that are used in measuring the thickness of a non-metallic material.

In regard to claim 2, Takahashi ('359) teaches an A.C. bridge circuit (linear analog sensor) (see col. 4, lines 13-19). GB 2 2217 835 teaches the use of ultrasonic, laser and inductive thickness measurement systems as equivalent alternatives. Therefore, it would have been

obvious for one of ordinary skill in the art to have provided an A.C. bridge circuit (linear analog sensor) inductive thickness measurement system as taught by Takahashi ('359) as an equivalent alternative to the laser thickness measurement system in the process of Bauer *et al.* ('124) because, GB 2 2217 835 specifically teaches that laser, ultrasonic and inductive systems are equivalent alternatives that are used in measuring the thickness of a non-metallic panel.

Specifically regarding claims 3-5 and 12, Bauer *et al.* ('124) teach a second robot arm (36A) that manipulates a gauging laser beam generator (48) that directs and reflects a low power laser beam (52) upon an automotive panel cover (42), said reflected laser beam being detected and analyzed by a laser gauging circuit (50). Further, Bauer *et al.* ('124) teach developing a signal from the laser gauging circuit (50) indicating the precise location of the cover surface at a point just ahead of the cutting laser (14B) such that the central computer control (38) determines the position of the cutting laser beam generator (34) (laser scoring) to be shifted by the robot arm (36) correspondingly (or to adjust the output beam) so as to maintain a groove depth which will produce a constant thickness of remaining material. Therefore, it would have been obvious for one of ordinary skill in the art to have provided an inductive thickness measurement system as taught by Takahashi ('359) as an equivalent alternative to the laser thickness measurement system in the process of Bauer *et al.* ('124) because, GB 2 2217 835 specifically teaches that laser, ultrasonic and inductive systems are equivalent alternatives that are used in measuring the thickness of a non-metallic material.

Regarding claims 7-8 and 13, Bauer *et al.* ('124) teach an automotive panel covering (42) that is scored in order to release an air bag.

8. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer *et al.* (US Patent No. 6,294,124 B1) in view of Takahashi (US Patent No. 4,870,359) and in further view of GB 2 2217 835 and GB 2 035 566.

Bauer *et al.* ('124) in view of Takahashi ('359) and in further view of GB 2 2217 835 teach the basic claimed process as described above. Further, it should be noted that Takahashi ('359) specifically teaches measuring the thickness of a curved body by maintaining contact between said induction probe and said non-metallic material because, said thickness signal is proportional to the distance between said metallic mold (2) and said induction probe (3) (See Figure 1 and col. 3, lines 44-65).

Regarding claim 6, Bauer *et al.* ('124) in view of Takahashi ('359) and in further view of GB 2 2217 835 do not teach mounting said induction probe on a flexible mechanism. GB 2 035 566 teaches a process for measuring the thickness of a non-metallic panel including, providing a non-metallic panel (1), positioning a metallic ball (2) opposite an inductive sensor (7) at a first position in contact with said non-metallic panel (1) and moving said metallic ball and said inductive sensor along said non-metallic panel to obtain measurements of the thickness of said panel (see page 1, lines 13-24 and 74-94 and, page 2, lines 79-90). Further, GB 2 035 566 teaches mounting the inductive sensor on a spring (8) (flexible mechanism) (see page 1, lines 80-85). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a spring (flexible mechanism) as taught by GB 2 035 566 to mount the induction sensor in the process of Bauer *et al.* ('124) in view of Takahashi ('359) and in further view of GB 2 2217 835 because, Takahashi ('359) specifically teaches that said thickness signal is proportional to the

distance between said metallic mold (2) and said induction probe (3) (See Figure 1) and as such, it is submitted that a spring (flexible) mechanism is required as taught by GB 2 035 566 in order to maintain direct contact while permitting said induction probe to follow the non-planar contour of said non-metallic material in the process of Bauer *et al.* ('124) in view of Takahashi ('359) and in further view of GB 2 2217 835.

Response to Arguments

9. Applicants' remarks filed September 22, 2003 (Paper No. 7) have been considered.

Applicants argue that the art of record does not teach or suggest, either alone or in combination, "utilizing an inductive sensor via the use of a 'metallic holding form'" (see pages 7-9 of the amendment filed September 22, 2003). However, this argument is drawn to a newly presented claim limitation not previously presented that has been rejected in this Office Action as set forth above.

Applicants argue that GB 2 217 835 requires "a second 'radiation type measuring device to measure the distance to a first surface of the object'" and as such, Applicants' invention "accomplish measuring in a single step with a single sensor without the need for the subtractive step" (see pages 9-10 of the amendment filed September 22, 2003). In response, it is noted that the teachings of GB 2 2217 835 were *not* (emphasis added) used to show an inductive measuring system, but merely to show *only* (emphasis added) that laser, ultrasonic and inductive systems are equivalent alternatives that are used in measuring the thickness of a non-metallic panel.

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (703) 305-0396 (until December 22, 2003) and (571) 272-1208 (after December 23, 2003). The examiner can normally be reached on Monday-Friday 8:00 AM to 5:30 PM and alternate Fridays off.

Art Unit: 1732

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached at (703) 305-5493 and (571) 272-1196 (after December 23, 2003). The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Stefan Staicovici, PhD



12/15/03

Primary Examiner

AU 1732

December 15, 2003